

## REMARKS

This Amendment is in response to the Office Action of November 20, 2002. Applicant respectfully submits that all the claims presently on file are in condition for allowance, which action is earnestly solicited.

## THE CLAIMS

### REJECTION UNDER 325 USC 103

Claims 1 - 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over West et al. in view of Pirolli et al. Applicant respectfully traverses this rejection and submits that the claims on file are not obvious in view of the cited references and are patentable thereover. In support of this position, Applicant submits the following arguments:

#### A. Legal Standards for Obviousness

The following are court opinions set the general standards in support of Applicant's position of non obviousness, with emphasis added for added clarity:

- **"Obviousness cannot be established** by combining the teachings of the prior art to produce the claimed invention, **absent some teaching or suggestion** supporting the combination." *In re Fine*, 837 F.2d at 1075, 5 USPQ2d at 1598 (citing *ACS Hosp. Sys. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)). **What a reference teaches** and whether it teaches toward or **away from the claimed invention** are questions of fact. See *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 960-61, 220 USPQ 592, 599-600 (Fed. Cir. 1983), cert. denied, 469 U.S. 835, 83 L. Ed. 2d 69, 105 S. Ct. 127 (1984). "
- "When a rejection depends on a combination of prior art references, there must be **some teaching, suggestion, or motivation** to combine the references. See *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987)." **Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or**

**motivation** to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See MPEP 2143.01; *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

- “With respect to core factual findings in a determination of patentability, however, the **Board cannot simply reach conclusions based on its own understanding or experience** -- or on its assessment of what would be basic knowledge or common sense. **Rather, the Board must point to some concrete evidence in the record** in support of these findings.” See *In re Zurko*, 258 F.3d 1379 (Fed. Cir. 2001).
- “We have noted that **evidence of a suggestion, teaching, or motivation to combine** may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, see *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), *Para-Ordinance Mfg. v. SGS Imports Intern., Inc.*, 73 F.3d 1085, 1088, 37 USPQ2d 1237, 1240 (Fed. Cir. 1995), although “the suggestion more often comes from the teachings of the pertinent references,” *Rouffet*, 149 F.3d at 1355, 47 USPQ2d at 1456. The range of sources available, however, does not diminish the requirement for actual evidence. That is, **the showing must be clear and particular**. See, e.g., *C.R. Bard*, 157 F.3d at 1352, 48 USPQ2d at 1232. **Broad conclusory statements regarding the teaching of multiple references, standing alone, are not “evidence.”** E.g., *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993) (“Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact.”); *In re Sichert*, 566 F.2d 1154, 1164, 196 USPQ 209, 217 (CCPA 1977).” See *In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999).
- “To prevent the use of hindsight based on the invention to defeat patentability of the invention, **this court requires the examiner to show a motivation to combine the references** that create the case of obviousness. In other words, **the examiner must show reasons** that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references **for combination in the manner claimed**.” See *In re Rouffet*, 149, F.3d 1350 (Fed. Cir. 1998).
- MPEP 2143.01-“The Prior Art Must Suggest The Desirability Of The Claimed Invention. There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.” *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) **(The combination of the references taught every element of the claimed invention, however without a**

**motivation to combine, a rejection based on a prima facie case of obvious was held improper.**) The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999).

- The mere fact that references can be combined or modified does not render the resultant combination obvious **unless the prior art also suggests the desirability of the combination**. In *re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, **there must be a suggestion or motivation in the reference** to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). See also In *re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).
- If the **proposed modification would render the prior art invention being modified unsatisfactory** for its intended purpose, **then there is no suggestion or motivation** to make the proposed modification. In *re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

## **B. Brief Summary of the Present Invention**

Prior to presenting substantive arguments in favor of the allowability of the claims on file, it might be desirable to summarize the present invention.

As indicated by the title, the present invention relates to a system and method for integrating off-line user ratings of businesses with search engines," and addresses the problem facing current search engines that "use a variety of criteria to order matches to the user query and to rank the search results with higher quality pages listed at the top of the search list. Assessing quality involves both accurately matching the user query and identifying a useful, current web page. For instance, search engines may order the matches based on what is referred to herein as "static criteria". Exemplary static criteria are the highest popularity, most recently updated, most visited, most queried, or most interconnected. It is common for users to limit the review of their search to only the first few matches of the search list." (Reference is made to page 2, line 18 through page 3, line 4 of the specification.)

The present invention also aims at providing an “adequate mechanism by which searches of business sites can be ordered based upon interactive criteria about the businesses themselves, correlating higher quality search matches to higher business satisfaction ratings. For example, popularity, is a commonly used static criterion which is determined by the number of visits or queries of business sites, and which may depend on advertising, strategic business alliances, or creative naming of a site, and is therefore independent of customers satisfaction with the ranked businesses.

Therefore, there is still an unsatisfied need for a system and method that integrate user provided interactive criteria, such as customers and on-line users' satisfaction, with search engine results.” Reference is made to page 3, lines 12-20 of the specification.

“Methods for collecting these ratings include, but are not limited to offline surveys such as consumers reports and surveys that are obtained through web or non-web based rating services that assess, for example, customer satisfaction. In another embodiment, rankings are provided by an independent ranking system through either offline or on-line surveys and the rankings are established independent of the search engine or the user of the search engine. Optionally, on-line questionnaires can be attached to the search engine, and the ratings provided by such on-line questionnaires and offline ratings can be weighted and combined to form a composite rating system.

The business rating system integrates the off-line ratings (and optionally the on-line ratings) with the search results, and ranks and presents the integrated search results to the user based on such ratings. In this manner, the user of a search engine receives feedback from other off-line and possibly on-line users and/or customers about businesses of interest. Those businesses with higher ratings are ranked at the top of the search list.

In operation, the user enters a query in the user interface of the search engine. The search engine searches the metadata repository for sites that match the user query, and also searches the business ratings repository. One or more sites in the metadata search results may correspond to matches in the business ratings search. The search engine determines the rank of each corresponding site in the ranking database and ranks the search results based on interactive criteria about the businesses. The ranked results are then presented to the on-line user.” Reference is made to page 4, line 4 through page 5, line 15 of the specification, with emphasis added.

### **C. West et al. Patent**

The office action rejects claims 1, 9, and 17 in light of the West et al. patent (“West”), stating that “West discloses an off-line ranking system for receiving any of users' off-line surveys or feedback about businesses, (col. 2, lines 12-25 and col. 7, lines 23-40); the off-line ranking system generating rating data from the of the users' off-line surveys or feedback, (col. 7, lines 23-40 and col. 9, lines 49-66); wherein the off-line ranking system indexes the rating data, (col. 5, lines 7-42). West shows in fig. 2 survey index table allowing the user to rank the rating data based on the total number of voting and the ranking of the rating of the data by the percentage; a ranking repository for storing the rating data indexed by the off-line ranking system, (col. 5, lines 7-42). West also shows the total number of voting and the ranking of the rating data by the percentage automatically stored in the database.”

**The office action further makes the following very important statement admitting the absence of a crucial aspect of the present invention from West: “West does not explicitly disclose “wherein the rating data correlates higher quality search matches to higher business satisfaction rating; and a result sorter for sorting query result generated by the search engine, based on the rating data from the ranking repository, and for generating ranked matches.” ”**

In order to find a substitute for this missing element, the Examiner resorted to another reference, Pirolli et al. ("Pirolli"), stating: "However, Pirolli shows wherein the rating data correlates higher quality search matches to higher business satisfaction rating, (col. 3, lines 31-col. 4, lines 60 and col. 2, lines 65-68). Pirolli shows the ranking of the search results based on the ranking information, so the user can retrieve[s] the best results based the ranking information not just matching the keyword inputted; and a result sorter for sorting query result generated by the search engine, based on the rating data from the ranking repository, and for generating ranked matches, (col. 3, lines 31-col. 4, lines 60 and col. 2, lines 65-68). Pirolli also shows the ranking results based on historical patterns and information about a current context of interest of a user or group; therefore, when a user requests for an information, the ranking system will generating the results based on the patterns and most interests context.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of West with the teaching of Pirolli, so the user can rely on the ranking system of the search results to determine which documents or businesses should be viewed first."

In summary, West describes an online voting system for facilitating live interactive online voting provides a standardized database architecture that integrates the editorial and production processes. The voting system has a survey database to store multiple surveys and a server to serve the surveys over a network to readers. The voting system includes an authoring tool to permit an editor to construct the surveys. The surveys are stored in a predefined database structure, referred to as the "survey index table". The survey index table includes fields to hold the survey identifier, question number, the question text as drafted by the editor, and option text as drafted by the editor (e.g., "yes" and "no"). The survey index table is replicated onto a live site periodically, allowing editors time to preview their surveys, and served by the site server to interested readers over the network.

The same index table holds the information to present the survey questions and to show the results to the survey. The online voting system presents the survey form to first time readers. However, once the reader has cast a vote, the online voting system returns the survey with the voting tallies (but without an opportunity to vote again) so the reader can view the survey results. Over time, as the survey becomes stale, the editor may remove one or more questions or the entire survey from the survey index table.

#### **D. Pirolli et al. Patent**

Pirolli describes a system and method for ranking the results of a search on a collection of linked documents. The system utilizes various information relating to the collection of linked documents, including the topology, content and historical usage of the linked collections of documents. The ranking is based on historical patterns and information about the current context of interest (e.g. what the user or group seems to be currently interested in doing). A spreading activation technique is used to identify the frequency of activation of the documents in the search results. Spreading activation techniques are based on representations of Web pages as nodes in graph networks representing usage, content, and hypertext relations among Web pages. After performing the spreading activation based on an initial set defined by the search results, each document from the results may be ranked based on their level of activation.

#### **E. Independent Claims 1, 9, and 17 in Light of West**

Applicant will now present arguments in support of the allowance of independent claims 1, 9, and 17, and the claims dependent thereon, over West and Pirolli. Claim 1, as a representative claim, recites the following elements that are not described in West:

"1. A system for use with a search engine to rank search results, comprising:  
an off-line ranking system for receiving any of users' off-line surveys or  
feedback about businesses;  
the off-line ranking system generating rating data from the any of the users'  
off-line surveys or feedback;  
wherein the rating data correlates higher quality search matches to higher  
business satisfaction ratings; and  
wherein the off-line ranking system indexes the rating data;  
a ranking repository for storing the rating data indexed by the off-line ranking  
system; and  
a result sorter for sorting query results generated by the search engine, based  
on the rating data from the ranking repository, and for generating ranked matches."  
(Emphasis added).

#### E. 1. First Missing Element

Applicant agrees with the examiner that West does not generate rating data that  
correlates higher quality matches to higher business satisfaction rating.  
Applicant submits that this is an essential element/limitation of the invention as  
recited in claims 1, 9, and 17.

In addition, West seems to be limited to an online voting system, and nowhere  
does it disclose, refer to, or become concerned with higher business satisfaction  
ratings. As a result, Applicant respectfully requests that West be withdrawn as being  
from a non-analogous art.

#### E. 2. Second Missing Element

The Examiner states that West discloses the following element: "the off-line ranking  
system generating rating data from the of the users' off-line surveys or feedback, (col.

7, lines 23-40 and col. 9, lines 49-66).” Applicant respectfully traverses this rejection ground and submits that Examiner’s statement is inconsistent with the assertion that the **rating data of West does not correlate higher quality matches to higher business satisfaction rating**. (Refer to Section E.1. First Missing Element).

“Rating data” is clearly defined in claims 1, 9, and 17, as rating data that correlates higher quality matches to higher business satisfaction rating, and thus the second element that is missing from West impliedly reads as follows: **“the off-line ranking system generating rating data that correlates higher quality matches to higher business satisfaction rating**, from the any of the users’ off-line surveys or feedback;

If, as stated by the Examiner, the rating data of West does not correlate higher quality matches to higher business satisfaction rating, then, contrary to the Examiner’s rejection ground, **the on-line ranking system of West cannot generate those rating data**.

Applicant further respectfully traverses this rejection ground, and reproduces herein, the texts in West that have been cited by the Examiner, to substantiate the assertion that **the texts cited by the Examiner does not disclose such claim element**:

“The survey can be optionally tested offline (step 112 in FIG. 5). An advantage of this system is that the survey index table is standardized and used multiple times for different surveys. Accordingly, the Web site operator can develop an assurance that the structure will work each time, as new surveys are added. For simple surveys, the editor can be reasonably assured that the survey will work once posted to the survey database. However, the editor may still like to run an offline test just to check for presentation and typographical errors.

The survey index table 40 is replicated to the live site (step 114 in FIG. 5). The replication phase occurs periodically at predetermined intervals (step 116 in FIG. 5).

For instance, the Web site operator may choose to replicate the survey index table 40 every fifteen minutes. This keeps the site current, and allows the editor to change the survey by adding or removing questions, add new surveys or remove old ones, and so forth, as the events change.” Column 7, lines 23-40.

“FIG. 7 shows the steps in the survey flushing procedure. The flush procedure of the vote handler 46 wakes up periodically (step 200). Preferably, the flush procedure is initiated every replication cycle when the editor's offline copy of the table is replicated to the live site. At step 202 in FIG. 7, the flush procedure detects any change in the editor's copy of the survey index table. Over time, as the poll becomes stale, the editor may delete one or more questions or the entire survey from the survey index table 40. The corresponding totals and percentages in fields 60 and 62 remain, however, because the editor does not have access to these fields. Likewise, the data for the deleted question(s)/survey(s) in the votes and totals tables 42 and 44 remains.

The flush procedure of the vote handler 46 archives a copy of the deleted question(s)/survey(s), along with the totals and percentages contained in the online index table, in persistent storage (step 204 in FIG. 7). After archival, the flush procedure deletes the voting data from all three tables (step 206 in FIG. 7).” Column 9, lines 49-66.

### E. 3. Third Missing Element

The Examiner states that West discloses the following element: “wherein the off-line ranking system indexes the rating data, (col. 5, lines 7-42).” Applicant respectfully traverses this rejection ground and submits that Examiner’s statement is inconsistent with the assertion that the **rating data of West does not correlate higher quality matches to higher business satisfaction rating**. (Refer to Section E.1. First Missing Element).

Due to the importance of this issue, Applicant reiterates that the term “rating data” is clearly defined in claims 1, 9, and 17, as rating data that correlates higher quality matches to higher business satisfaction rating, and thus the third element that is missing from West impliedly reads as follows: “wherein the off-line ranking system indexes the rating data that correlates higher quality matches to higher business satisfaction rating.”

If, as stated by the Examiner the rating data of West does not correlate higher quality matches to higher business satisfaction rating, then, contrary to the Examiner’s rejection ground, the on-line ranking system of West cannot index rating data that correlates higher quality matches to higher business satisfaction rating.

Applicant further respectfully traverses this rejection ground, and reproduces herein, the texts in West that have been cited by the Examiner, to substantiate the assertion that the texts cited by the Examiner does not disclose such claim element:

“The survey index table 40 further includes a total votes field 60 to hold the voting totals for corresponding questions and answer options and a percentage field 62 to hold the voting totals as a percentage.

Some of the fields are filled in automatically, while other fields contain data entered by the editor. The survey ID field 50 contains a number or other unique identifier that is chosen by the editor for each new survey. The ID may simply be the unique identifier (URL) of the story in which the survey will be displayed, or a `slug` (e.g. `spt.sub.--0205\_jordanretire`) that allows editors to quickly identify the survey. The question number field 52, question text field 54, option number field 56, and option text field 58 are all filled in by the editor, via the authoring tool 36. The last two fields 60 and 62 are filled in automatically by stored procedures in the survey database 38 (discussed below in more detail).

The fields in the survey index table 40 can be segregated into two types: an editorial type, which is filled in during the editorial phase, and a results type, which is filled in automatically while the survey is in operation on the live Web site.

Each question consumes multiple rows in the table. There is an initial row 64 that marks the beginning of the question. This row 64 is associated with the question via the survey ID and holds the voting totals and percentage for the entire question. In this example, the total "6,087" in the first row 64 of the total votes column 60 is the sum of the votes for each option below.

There is a row for each answer option of the question. In this example, the question has two options and thus the table entry includes two rows 66 and 68, one for each option. The middle row 66 contains the text of the "yes" option in field 58, and the voting results for that option in the total votes field 60 and percentage field 62. The last row 68 contains the text of the "no" option in field 58 and the voting results for that option." Column 5, lines 7-42.

#### E. 4. Fourth Missing Element

The Examiner states that West discloses the following element: "a ranking repository for storing the rating data indexed by the off-line ranking system, (col. 5, lines 7-42)." Applicant respectfully traverses this rejection ground and submits that Examiner's statement is inconsistent with the assertion that the **rating data of West does not correlate higher quality matches to higher business satisfaction rating.** (Refer to Section E.1. First Missing Element).

Applicant reiterates once again that "rating data" is clearly defined in claims 1, 9, and 17, as **rating data that correlates higher quality matches to higher business satisfaction rating,** and thus the fourth element that is missing from West impliedly reads as follows: "a ranking repository for **storing the rating data** indexed by the off-line ranking system that **correlates higher quality matches to higher business satisfaction rating** and that are **indexed** by the on-line ranking system."

If, as stated by the Examiner the rating data of West does not correlate higher quality matches to higher business satisfaction rating, then, contrary to the Examiner's rejection ground, the on-line ranking repository of West cannot **store the indexed rating data that correlates higher quality matches to higher business satisfaction rating.**

#### **E. 5. Fifth Missing Element**

The Examiner states that West discloses the following element: "West shows in fig. 2 survey index table allowing the user to rank the rating data based on the total number of voting and the ranking of the rating of the data by the percentage; and West also shows the total number of voting and the ranking of the rating data by the percentage automatically stored in the database." Applicant respectfully traverses this rejection ground and submits that Examiner's statement is inconsistent with the assertion that the **rating data of West does not correlate higher quality matches to higher business satisfaction rating.** (Refer to Section E.1. First Missing Element).

Applicant reiterates yet once again that "rating data" is clearly defined in claims 1, 9, and 17, as **rating data that correlates higher quality matches to higher business satisfaction rating,** and thus the fifth element that is missing from West impliedly reads as follows: "a result sorter for **sorting query results** generated by the search engine, based on the rating data that **correlates higher quality matches to higher business satisfaction rating** from the ranking repository, and for generating ranked matches."

If, as stated by the Examiner the rating data of West does not correlate higher quality matches to higher business satisfaction rating, then, contrary to the Examiner's rejection ground, the on-line ranking repository of West cannot **sort the query results based on the rating data that correlates higher quality matches to higher business satisfaction rating.**

To conclude, independent claims 1, 9, and 17 are allowable over West, and thus the claims dependent thereon are also allowable. Such allowance is respectfully requested.

#### **F. Independent Claims 1, 9, and 17 in Light of West and Pirolli**

##### **F.1. Pirolli does not disclose the rating data of the present invention**

The Examiner cites Pirolli as disclosing “wherein the rating data correlates higher quality search matches to higher business satisfaction rating, (col. 3, lines 31 - col. 4, lines 60 and col. 2, lines 65-68).” Applicant respectfully traverses this rejection ground, and reproduces herein, the text that has been cited by the Examiner, to substantiate the assertion that **the text cited by the Examiner does not disclose such an important claim element**. In the following excerpts, the texts referencing the ranking process are underlined:

“A system for ranking the results of a search for documents from a collection of linked documents is disclosed. The ranking is based on historical patterns and information about a current context of interest of a user or group.”

The currently preferred embodiment of the present invention is implemented for ranking the resulting set of documents obtained through a search of a collection of linked documents residing on the portion of the Internet known as the World Wide Web (hereinafter the Web). However, it should be noted that the present invention is not limited to use on the Web and may be utilized in any system which provides access to linked entities, including documents, images, videos, audio, etc. Further, in this description, the term Web page is an instance of a linked document and the two terms may be used interchangeably.

It has been observed that a collection of Web pages has a topology that is defined by links contained in the individual Web pages. Links are an indicator on a Web page which refers to another Web page and which can typically be retrieved in a point and click fashion. The link will specify the address, i.e. Uniform Resource Locator or URL, of the other Web page. On the Web the URL is commonly specified using the HyperText Transport Protocol (HTTP).

The present invention is motivated by the need to assist users in finding information on the World Wide Web. As the amount of information accessible on the Web continues to grow, much of it becomes out dated and redundant. It would be useful to be able to sort and rank search results based on measurements other than the similarity of web pages to the query or by the classifications provided. In particular, it has been determined through observation that it would be useful to order the presentation of search results using a historical and context based perspective.

For example, a user may want a ranking based on the most recently accessed documents. This would assist the searcher in determining if the information is "stale". This would be desirable if the information being sought has a limited "useful life", e.g. legal information or other information which may frequently change.

The ranking of the Search Result provides valuable information to the user. The user may rely on the ranking of the search results to determine which documents should be viewed first. Or the user may use the ranking to exclude documents from being viewed.

One aspect of the present invention provides a way in which search results may be ordered, other than by category or by similarity to the user's text query. Also it should be noted that the present invention can be used in combination with techniques for ordering search results based on text similarity with the user query.

Another use of the present invention may be to remove infrequently used documents from a document collection. For example, suppose it is determined that a document collection contains too many documents relating to a particular subject. This can be done by performing a search on the subject and determining that the number of documents in the search results exceeds some threshold. Anyway, the present invention can then be used to order the search results based on frequency of access. The least frequently accessed documents may then be removed from the document collection.

#### Overview of the Search Result Ranking Technique of the Currently Preferred Embodiment

The flowchart of FIG. 1 describes the general steps for performing the steps of the present invention wherein the user desires that the search result be ordered to take into account the historical usage of the document collection and a user or group context. It should be noted that the steps need not necessarily be carried out in the order described. For example, the initial data gathering and matrix generation steps could be performed independently and updated on a periodic basis. The generated matrices could be applied to any search on the document collection. It should also be noted that different matrices representing different attributes of the document collection, may be used. The matrices used would depend on the different

characteristics desired for the ordering. Co-pending application Ser. No. 08/831,807 describes how different matrices can be used to obtain different characteristics.

In any event, first, empirical data relating to the document collection is gathered, step 101. The empirical data may typically reside on usage records for the particular document collection (e.g. derived from Web Site usage records), or may be generated through analysis of the documents in the document collection (e.g. determining content similarity or link topology).

Next, a matrix of page to page transitions  $S$  is initialized, step 102. This is typically a usage-based matrix. The entries in the matrix indicate the proportion of users viewing a page that go from a particular page to another linked page.

Next, a probability function or vector is initialized embodying the law of surfing, step 103. The law of surfing is based on observations of raw data concerning usage of a document collection. The law of surfing provides an indication of the proportion of people who have produced  $L-1$  clicks who then make another  $L$ th click (i.e., the people who have not left after  $L-1$  clicks)." Column 3, line 31 - column 4, line 60.

"and ranking said search results based on said ranking information, said ranking based on the level of activation achieved." Column 2, lines 65 - 68.

#### F.2. West cannot be combined with Pirolli to form a proper rejection ground

The Examiner further adds: "Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of West with the teaching of Pirolli, so the user can rely on the ranking system of the search results to determine which documents or businesses should be viewed first."

Applicant submits that it is axiomatic that simply because a reference (i.e., West) can be modified (and it is not clear how West could in fact be modified to use rating data that correlates higher quality matches to higher business satisfaction rating since Pirolli does not disclose this element), it is insufficient to establish a prima facie case of obviousness unless the prior art motivates the modification. Indeed, actual evidence of this is required, and broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. Reference is made to the extensive legal authorities cited earlier in support of this traversal position.

With the foregoing legal authorities in mind, Applicant submits that the Examiner has failed to identify a prior art suggestion to combine West with Pirolli, but has rather simply made conclusory statements. As best understood, what the Office Action is saying is that once West is modified (in some unsupported way) to use the ranking system of Pirolli to determine which documents should be viewed first.”

In addition to the fact that Pirolli does not disclose the missing elements, and that there is insufficient ground for combining West and Pirolli, the ground stated by the Examiner is too broad and encompassing to form a proper specific rejection ground as legally required. The fact that the use of a ranking system could help the user determine which documents to view first is a general truism that does not bear relevance to the specific invention, as claimed.

To conclude, independent claims 1, 9, and 17 are allowable over West and Pirolli, whether considered separately or in combination with each other. Such allowance is respectfully requested.

#### **G. Claims 2, 10, and 18**

The Examiner has rejected claims 2, 10, and 18 based on the ground that “Pirolli further discloses a search results transformer that converts the ranked matches to a user browsable form, (col. 3, lines 31 - col. 4, lines 50).”

Applicant submits that claims 2, 10, and 18 are allowable for depending on the allowable claims 1, 9, and 17, respectively.

#### **H. Claims 3, 11, and 19**

The Examiner has rejected claims 3, 11, and 19, based on the ground that “Pirulli further discloses an indexing engine that indexes web documents to generate indexed data, (cot. 3, lines 31-cot. 4, lines 50).”

Applicant submits that claims 3, 11, and 19 are allowable for depending on the allowable claims 1, 9, and 17, respectively.

#### **I. Claims 4, 12, and 20**

The Examiner has rejected claims 4, 12, and 20, based on the ground that “West further discloses a metadata repository for storing web documents that have been downloaded off-line, (col. 7, lines 22-40).”

Applicant submits that claims 4, 12, and 20 are allowable for depending on the allowable claims 1, 9, and 17, respectively.

#### **J. Claims 5, 13, and 21**

The Examiner has rejected claims 5, 13, and 21, based on the ground that “Pirulli further discloses a query transformer which, when prompted by a query, applies a query request to the indexed data and generates the query results, (col. 3, lines 31-col. 4, lines 50).”

Applicant submits that claims 5, 13, and 21 are allowable for depending on the allowable claims 1, 9, and 17, respectively.

#### **K. Claims 6, 14, and 22**

The Examiner has rejected claims 6, 14, and 22, based on the ground that "Pirolli further discloses the on-line source includes an on-line feedback with annotations, (col. 3, lines 31-col. 4, lines 50)."

Applicant submits that claims 6, 14, and 22 are allowable for depending on the allowable claims 1, 9, and 17, respectively. In addition, to the best of Applicant's understanding of Pirolli, the cited text does not disclose the use of annotations.

#### **L. Claims 7, 15, and 23**

The Examiner has rejected claims 7, 15, and 23, based on the ground that "West further discloses the off-line source includes any one or more of a questionnaire, a survey, or a web based rating service, (col. 5, lines 28 - col. 6, lines 3)."

Applicant submits that claims 7, 15, and 23 are allowable for depending on the allowable claims 1, 9, and 17, respectively. In addition, to the best of Applicant's understanding of West, the cited text does not disclose the use of any one or more of a questionnaire, a survey, or a web based rating service.

#### **M. Claims 8, 16, and 24**

The Examiner has rejected claims 8, 16, and 24, based on the ground that "West further discloses the interactive criteria assess the quality of a business in terms of any one or more of: customer satisfaction, professionalism, cost, and ease of use of a product or service, (col. 4, lines 18-63)."

Applicant submits that claims 8, 16, and 24 are allowable for depending on the allowable claims 1, 9, and 17, respectively.

## **CONCLUSION**

All the claims presently on file in the present application are in condition for immediate allowance, and such action is respectfully requested. If it is felt for any reason that direct communication would serve to advance prosecution of this case to finality, the Examiner is invited to call the undersigned at the below-listed telephone number.

Respectfully submitted,



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